Draft Fish, Wildlife & Parks Region 6 Prairie Dog Abundance and Distribution Objectives Plan

Region 6 Prairie Dog Advisory Board
August 2005

ACKNOWLEDGEMENTS

Montana Fish, Wildlife & Parks (FWP) sincerely appreciates the time and effort that members of the Region 6 Prairie Dog Advisory Board and interested parties devoted to developing this document. The distribution and abundance objectives in this plan were developed through a collaborative process in April and May 2005. The successful management of this controversial species may not be possible with continued commitment displayed by these people.

Region 6 Prairie Dog Advisory Board members

Rich Adams - Bureau of Land Management

Ken Blunt – Ranching/Local Business

Rod Boland – Local Business/Recreational Shooting Interests

Ann Boothe – Malta Chamber of Commerce & Agriculture

Francis Jacobs - Landowner/Rancher

Randy Matchett – US Fish and Wildlife Service

Rick Northrup – Montana Fish, Wildlife & Parks

Sterling Miller – National Wildlife Federation

Linda Poole – The Nature Conservancy

Hoyt Richards – Department of Natural Resources and Conservation

Steve Roth – Landowner/Ranching

Darryl Seeley – Local Business/Banking

Matt Veit – Local Business/Banking

FWP would also like to acknowledge the contributions made by staff members, agency personnel, and public participants in the Region 6 prairie dog planning process. The contributions made by these people strengthened this document: Leo Barthelmess, Darrel Bergtoll, Troy Blunt, Jay Bodner, John Carlson, Nedra Chandler, Joanne Dullum, Jeri Engstrom, Thomas Fisher, Steve Forrest, Bill French, Pat Gunderson, John Grensten, Jeff Hockett, Ron Holzhey, Valerie Kopsco, Warren Lybeck, Rick Northrup, Michael Nye, Vicki Olson, Eva Oxarart, Grex Oxarart, Steve Page, David Pippen, Jonathan Proctor, Bill Rathert, Ryan Rauscher, Bruce Reed, Randy Rees, Clyde Robinson, Jim Satterfield, Nichole Rubeck-Schortz, Josh Sorlie, Ron Stoneberg, Mark Sullivan, Mike Tvedt, Kathy Van Hook, Dale Veseth, Randy Vogel, Dan Waters, members of the South Phillips County Rancher Stewardship Alliance, and numerous others.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

The Draft Region 6 Prairie Dog Abundance and Distribution Objectives (the Plan) was developed as a collaborative effort through the Region 6 Prairie Dog Advisory Board (the Board) that is comprised of individuals and organizations of local interest, non-governmental organizations, and state and federal agencies. Montana Fish, Wildlife & Parks and USDI Bureau of Land Management (BLM) provided funding support for development of this Plan, including meeting facilitation by the Montana Consensus Council.

The Plan tiers from Objective #2, Strategy B of the statewide "Conservation Plan for Black-Tailed and White-Tailed Prairie Dogs in Montana (MPDWG 2002)." The chief purpose of this Plan is to provide specific acreage and complex objectives for prairie dogs within the Region 6 Fish, Wildlife & Parks boundary in northeast Montana. Region 6 is the first FWP Region to develop a prairie dog abundance and distribution plan.

Throughout the planning process, members of the Board and the public raised a variety of issues that are related to prairie dog abundance and distribution. The Plan describes these issues and also identifies a list of prairie dog conservation tools and resources that are available or may be available in the future to address specific needs of stakeholders. Many aspects of prairie dog and associated species conservation are the responsibility of the Montana Prairie Dog Working Group and are also recognized in the statewide prairie dog plan. Therefore, the Plan is intended to describe only the issues related to prairie dog management and abundance and distribution standards in Region 6. Extensive information regarding the biology of black-tailed prairie dogs and associated species are found elsewhere in the literature and are not included in this document.

BACKGROUND

Petitions and Conservation Planning

Over their range, black-tailed prairie dogs have declined in abundance and distribution primarily as a result of extensive poisoning, loss of habitat, and plague. The prairie dog is an important native component of prairie ecosystems and provides unique habitat for a variety of associated species. Prairie dog conservation planning has been underway in Montana since the late 1980's when black-footed ferrets were being considered for re-introduction into parts of eastern Montana (MPDWG 2002).

The Montana Prairie Dog Working Group was organized and initiated development of a statewide prairie dog conservation plan in 1996. This effort was accelerated in 1998 when two range-wide petitions to list the black-tailed prairie dog as "threatened" under the federal Endangered Species Act were received by the U.S. Fish and Wildlife Service (USFWS) (MPDWG 2002). Upon review of the petitions and related information compiled by the involved states and after extensive public comment, the USFWS determined that listing of the black-tailed prairie dog was warranted but precluded due to a number of higher priority species also being considered for listing (65 FR 5476). As a result, the black-tailed prairie dog was

designated a "candidate species" in early 2000. As part of an annual review, the black-tailed prairie dog was dropped from candidacy by the USFWS in August 2004 (69 FR 51217). On February 2, 2005, the USFWS received a Notice of Intent to Sue regarding this finding from Forest Guardians et. al.

In 1998, states within the range of black-tailed prairie dogs organized the Interstate Prairie Dog Conservation Team to assess the range-wide status, threats, and conservation needs of prairie dogs and to develop a strategy that would help guide conservation efforts. That plan entitled, "A Multi-State Conservation Plan For The Black-tailed Prairie Dog, *Cynomys ludovicianus*, in the United States – an addendum to the Black-tailed Prairie Dog Conservation Assessment and Strategy, November 3, 1999" was published in 2003 (Luce 2003).

The Region 6 Prairie Dog Abundance and Distribution Plan is an offspring of all these broader planning efforts and reflects a commitment by Montana Fish, Wildlife & Parks and its partners to manage for black-tailed prairie dogs in Region 6 in a manner that is in alignment with the statewide plan, meets the needs of prairie dogs and associated species, as well as landowners, businesses, and recreationists.

Black-Tailed Prairie Dog Legal Status and FWP Management Authority

The authority of Montana Fish Wildlife & Parks for managing prairie dogs originates from a number of statutes. The responsibility and authority to "supervise Montana's wildlife" are given to Montana FWP (87-1-201, MCA). Prairie dogs are designated as nongame species under Montana statute 87-5-102, MCA. Montana statute 87-5-103, MCA declares that it is state policy to ensure perpetuation of nongame wildlife as "members of ecosystems." HB492, passed by the 2001 Montana Legislature, further established authority for FWP to designate prairie dogs as "nongame wildlife in need of management" and provides authority to establish management regulations. HB492 also affirms the ability of landowners to control prairie dogs on private lands.

Black-tailed prairie dogs are also classified by the Montana Department of Agriculture as vertebrate pests (80-7-1101, MCA) and as rodents for purposes of rodent control districts (7-22-2207(6) MCA).

BLM Resource Management Plans

In FWP Region 6, the Bureau of Land Management (BLM) is working under 3 separate resource management plans, affecting primarily BLM administered lands. They include: 1) The Judith, Valley, Phillips Resource Management Plan; 2) The West Hi-Line Resource Management Plan; and 3) The Big Dry Resource Management Plan. Each of these documents provides management objectives related to prairie dogs on lands administered by the BLM.

The Judith, Valley, Phillips Resource Management Plan (JVPRMP) includes Valley and Phillips Counties within Region 6. The JVPRMP includes an objective to manage for 26,000 acres of black-tailed prairie dogs in Phillips County south of Highway 2, also known as the "7k Complex." This objective is an overall objective including private, state, BLM, and USFWS-

administered lands and reflects prairie dog levels observed in a 1988 survey. The primary objective of the 7k Complex is to re-establish a black-footed ferret population. Remaining portions of Phillips County as well as Valley County are not designated for ferret reintroduction and prairie dogs are intended to be managed at the 1988 levels and/or controlled based on the "values or problems encountered" (Record of Decision and Resource Management Plan Summary, JVPRMP and EIS, September 1994).

The West Hi-Line Resource Management Plan includes Hill, Chouteau and Blaine Counties within Region 6. This plan does not list specific acreage objectives and does allow for expansion and control of prairie dogs subject to policies regarding candidate, threatened, and endangered species. One particular prairie dog town is listed in the plan with an objective to manage to provide habitat for associated species and recreational shooting. Prairie dog towns under 10 acres will not be actively managed under this resource management plan.

The Big Dry Arm Resource Management Plan includes McCone, Richland, and Dawson Counties within Region 6. An acreage estimate of 2,500 acres is reported for a larger 12-county area that is largely outside of Region 6. This resource management plan allows for natural fluctuations of prairie dogs and does not specifically prohibit control or expansion of prairie dogs.

South Phillips County Rancher Stewardship Alliance

In response to increased interest in a number of wildlife species occurring in south Phillips County and the possible listing of one or more of those species under the federal Endangered Species Act, a group of private landowners formed the South Phillips County Rancher Stewardship Alliance in the spring of 2003. Their purpose is to develop a ranching and wildlife stewardship plan that focuses specifically on black-tailed prairie dogs, black-footed ferrets, and sage grouse. Representatives from this group have been actively involved in the development of the Region 6 Prairie Dog Abundance and Distribution Plan.

Prairie Dog Habitat in Region 6

Physical Environment

Much of the geology of the area occupied by prairie dogs in northeast Montana is classified as the Montana Group and was formed in the Cretaceous Period an estimated 14 million years ago. The Montana Group consists of Bearpaw shale, Judith River sandstone, Siltstone, and shale, Clagget shale, Eagle sandstone and Telegraph Creek sandy shale. The area encompassed by this group extends east to Liberty County in the west to Roosevelt County in the east and from the Missouri River in the south to the Canadian Boarder on the north (Alt and Hyndman 1994).

A GIS analysis of current prairie dog towns in Region 6 revealed that prairie dogs occur more than expected in areas of Boralf soils and less than expected in areas of Ustert, Boroll, Orthent, Ochrept, and Argid soils (Rauscher 2004). Proctor (1998) also found that prairie dogs in his study in Region 6 were associated with clay-loam soils more than expected.

The GIS analysis (Rauscher 2004) also found that prairie dogs occur more than expected where the slope is 3 percent or less and negatively associated with slopes of 4 - 6 percent. Proctor (1998) found that prairie dogs occurred more than expected on slopes of 0 – 4 percent.

Region 6 encompasses a diverse area extending from Hill and Chouteau counties in the west to the North Dakota border in the east. However, the climate is remarkably similar across the region. The average annual temperature varies from 42.8 degrees Fahrenheit in Havre to 41.9 in Glasgow. Average precipitation varies from 12.7 inches in Havre to 13.1 in Plentywood. Average number of days where the temperature is below 32 is approximately 188 across the region. The average annual wind speed is 10.6 mph in Glasgow and 9.5 mph in Havre (NOAA 2004).

Biological and Social Environment

Two independent GIS analyses (Rauscher 2004 and Proctor 1988) using GAP Satellites Image Land cover showed that prairie dogs occurred more than expected in dry shrub land, badlands, barren land, and upland grasslands. Prairie dogs occurred less than expected in dry land agriculture and moderate to high cover grasslands.

There are approximately 22,000 mi^2 (57,000 $km^{2)}$ of historic prairie dog range within Region 6. Of that range, the major land use is associated with livestock grazing (16,200 mi^2 (42,000 km^2)). The remaining 5,800 mi^2 (15,000 km^2) is primarily associated with crop production (Fig. 1).

Recreation associated with prairie dog towns in Region 6 consists primarily of prairie dog shooting. Although limited data exists, prairie dog shooting remains popular across Region 6 with the greatest activity in Phillips and Chouteau counties. Other recreational activities associated with prairie dog towns include hunting of game animals, trapping and wildlife viewing.

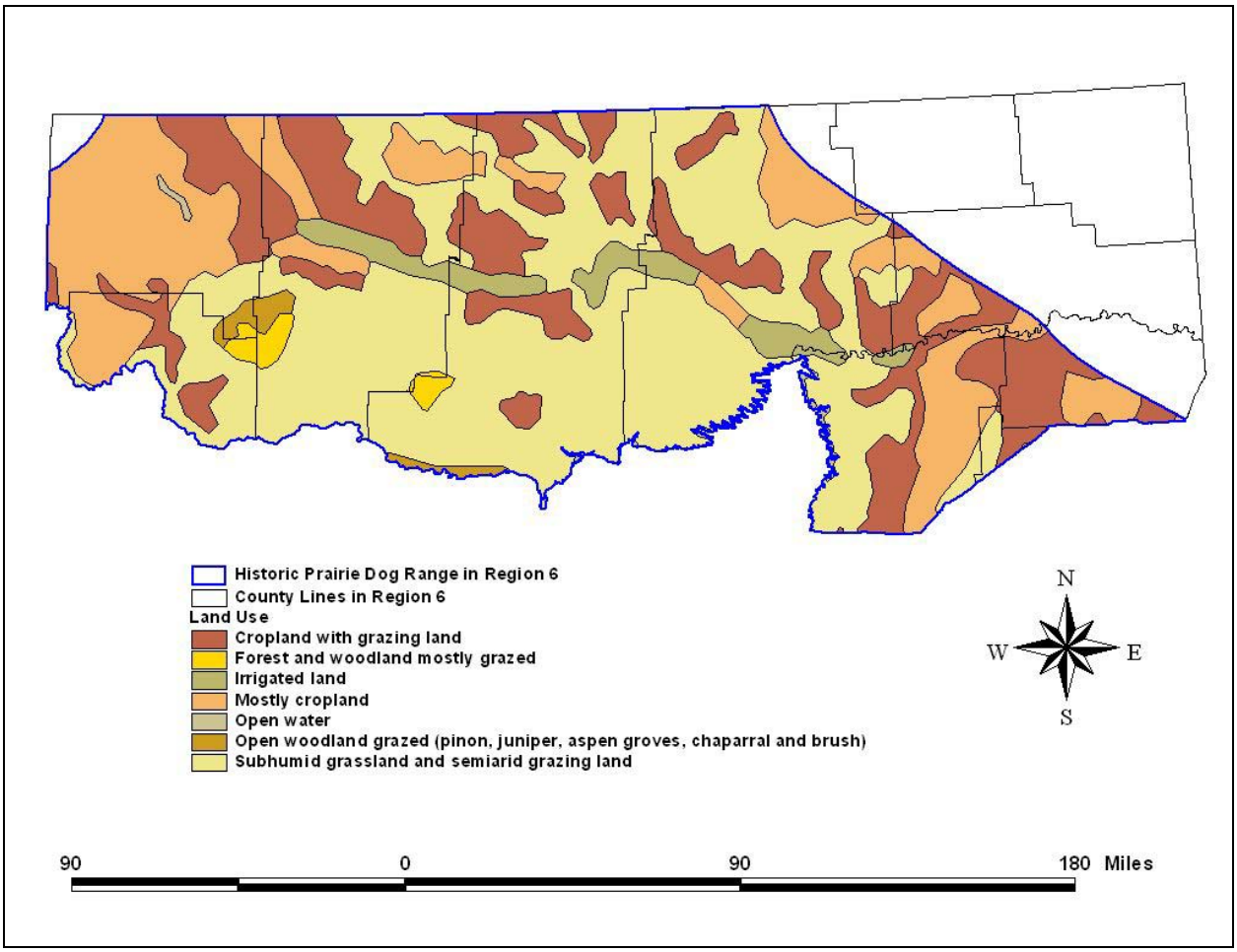

Figure 1. Landuse within Region 6 Historic Prairie Dog Range

Associated Species

Prairie dog colonies provide associated wildlife species with food, shelter and required habitat features. Prairie dogs also serve as prey for a variety of predators. The black-footed ferret is an obligatory predator and also uses prairie dog burrows for shelter and protection. Many raptor species prey upon prairie dogs including golden eagles, ferruginous hawks, and prairie falcons. Other predators include badgers, coyotes, bobcats and prairie rattlesnakes.

Other wildlife species use habitat features associated with prairie dog towns including the sparser or short-growth form, early successional stage vegetative cover and burrows. The primary breeding habitat of burrowing owls is prairie dog towns. Burrowing owls use the abandoned burrows to nest and rear their young as well as protection from weather and predators. Mountain plovers prefer areas of extremely short vegetation created by sheep or prairie dog grazing and clipping of stems (Knowles et. al. 1982).

Many other species are more loosely associated with prairie dog colonies. Over 100 vertebrate species are known to use prairie dog towns in Montana. Some of these include weasels (long-tailed and least), cottontail rabbits (desert and mountain) pocket gophers, and horned larks.

Black-footed Ferrets

The USFWS provided the following summary, which was as up-to-date and as accurate as possible in the summer of 2005. Nonetheless, this information provides a background to the status of black-footed ferret recovery. This information was gleaned from a wide variety of sources including various unpublished reports, previous summaries, meeting notes, status updates and personal communications. Information quality and availability varies from site to site. For some categories in the following tables, there are inconsistencies among previously reported values and some numbers may vary by a few animals. In other cases, the best point estimate available is provided with caveats. Nonetheless, the following information represents the best available snapshot as of the writing of this plan. The efforts/information provided by people from all the different reintroduction sites are very much appreciated and this summary would not be possible without their contributions. In addition to preparing and providing this summary as requested for use in Montana Fish, Wildlife and Parks' black-tailed prairie dog management planning efforts, the information is also being shared with all reintroduction sites and other interested participants. Short narrative sketches of reintroduction site status are presented below.

1. Shirley Basin, Wyoming was the first reintroduction site with releases of captive-reared ferrets in 1991. The area was affected by plague during the mid-1990's, and a relatively small ferret population was thought present through 2001. Renewed survey efforts have recently confirmed nearly 100 ferrets during fall 2004 on the 38,000+ acres of white-tailed prairie dogs in the area known as PMZ-1. Continued monitoring will help solidify many aspects of current population status.

2. Buffalo Gap National Grasslands (BGNG), Conata Basin, South Dakota has shown the most consistent, steady and significant ferret population growth among all reintroduction efforts. More than 1,000 wildborn kits have been produced since releases began in 1996. The site has provided numerous kits for translocation to other sites. Wildborn kits produced per year on the BGNG is more than triple the production of the next most productive site and is 19 times more productive than the average of the other 10 reintroduction sites combined. Black-tailed prairie dog acreage in this plague-free area has grown to more than 20,000 acres, virtually all of which meets the 1.5 km complex rule.

3. Cheyenne River Sioux Tribe has been successful in perpetuating a ferret population in one management zone, but had to remove resident ferrets from another management zone and abandon recovery efforts there because of landowner concerns about prairie dogs. This is the third most successful site in terms of population establishment and is also in an area considered plague-free.

4. Rosebud Reservation – Black-footed ferret reintroductions began only recently in this plague-free area, and shows early promise for establishing a ferret population.

5. All other sites have struggled for a variety of reasons and population establishment remains uncertain. There was great optimism when Mexico began reintroductions on a very large colony, but the site is located in a desert environment that has experienced severe drought for many years and very few prairie dogs are known to have survived, let alone ferrets. UL Bend National Wildlife Refuge has become a focal point for research, largely because of the monitoring capability, but population establishment has been disappointing. A total of 95 ferrets have been released on the Montana BLM 40 Complex since 2001. Surveys have verified, has observed 6 wildborn kits, and plague research has been ongoing on this site. Lack of an organized effort and plague has limited continuing efforts to establish ferrets on the Fort Belknap Reservation in Montana. Surveys conducted in Badlands National Park, in plague-free South Dakota, documented no ferrets in 2004 on reintroduction sites where 175 ferrets had been released since 1994. The Colorado and Utah reintroduction are plague-prone white-tailed prairie dog colonies and have their own set of logistic difficulties with terrain and relatively large complexes to search. Until recently, surveys have not detected find ferrets in the wild nor have they documented wild reproduction at the Arizona reintroduction site. Nevertheless significant resources have been invested into field pen breeding and ferret releases.

Current Prairie Dog Distribution

There are approximately 34,500 occupied acres of prairie dog towns in Region 6 based on current knowledge (Table 1.) and the most recent survey information available. The majority of data was collected from 2000 to 2003. However, some data was collected as early as 1996.

The statewide prairie dog plan (MPDWG 2002) provides for conservation of prairie dogs and associated species according to three categories of prairie dog complexes as determined by applying the 7 km rule for distance to nearest neighbor. The "7 km rule" is the convention adopted by the Interstate Black-tailed Prairie Dog Conservation Team. The physical description of a Category 1 complex in the statewide plan is defined as a complex of at least 5,000 acres of prairie dogs, but may range up to 12,000 acres following the 7 km rule. A Category 2 complex is defined as a complex of at least 1,000 acres of prairie dogs following the 7 km rule. A Category 3 complex is defined as a complex less than 1,000 acres of prairie dogs as defined by the 7 km rule plus scattered isolated colonies of any acreage.

Given the current understanding of prairie dog acreage and distribution, Region 6 supports one Category 1 Complex of 24,720 acres under the 7 km rule (Table 1.) The current known acres occupied by prairie dogs by Category 2 and 3 complexes in Region 6 are listed in Table 1. Locations of Complexes by Category are displayed in Figure 2.

Table 1. Known Prairie Dog Acres in Region 6 in 2004, by complex category (as defined by 7 km rule).

Complex Category	Number of Complexes	Current Prairie Dog Acreage
1	1	24,720
2	3	6,383
3	22	3,415
Total		34,518

Complex size and colony distance rules within a complex have been and are currently debated with regard to minimum requirements for the recovery of black-footed ferrets. The objective of a Category 1 complex is to provide sufficient habitat to sustain a viable population of black-footed ferrets. One mile between colonies (known as the 1.5 km rule) and a minimum of 5,000 acres occupied prairie dog habitat is an alternate definition of a complex that may support a viable population of black-footed ferrets (CBSG 2004). Under the 1.5 km rule, Region 6 does not support such a complex. The largest complex under the 1.5 km rule in Region 6 is comprised of 2,146 acres (Rauscher 2004). In early 2005, there were a total of 6 complexes under the 1.5 km rule larger than 1,000 acres (Fig. 3.) Some of the colonies within these complexes experienced a plague epizootic event in 2005. Therefore, it is not known exactly how many complexes under the 1.5 km rule exist in Region 6 until mapping is completed in the fall and winter of 2005. Factors other than colony size and spacing may be precluding the successful recovery of black-footed ferrets in Montana. Some of these factors include sylvatic plague, predation, genetics, disease, and other factors unknown at this time.

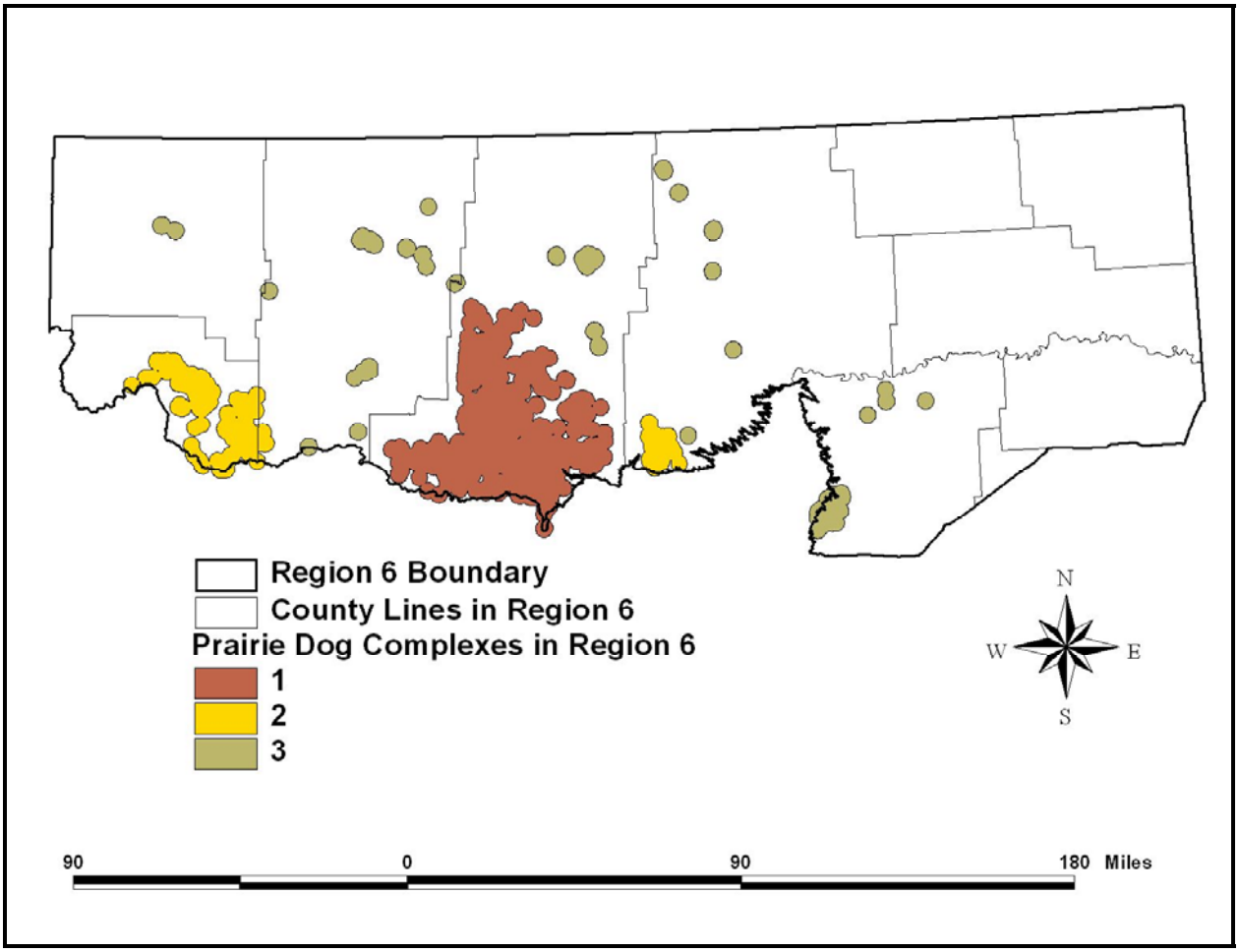

Figure 2. Prairie Dog Complexes as defined by the 7 km rule in Region 6 outside of tribal lands.

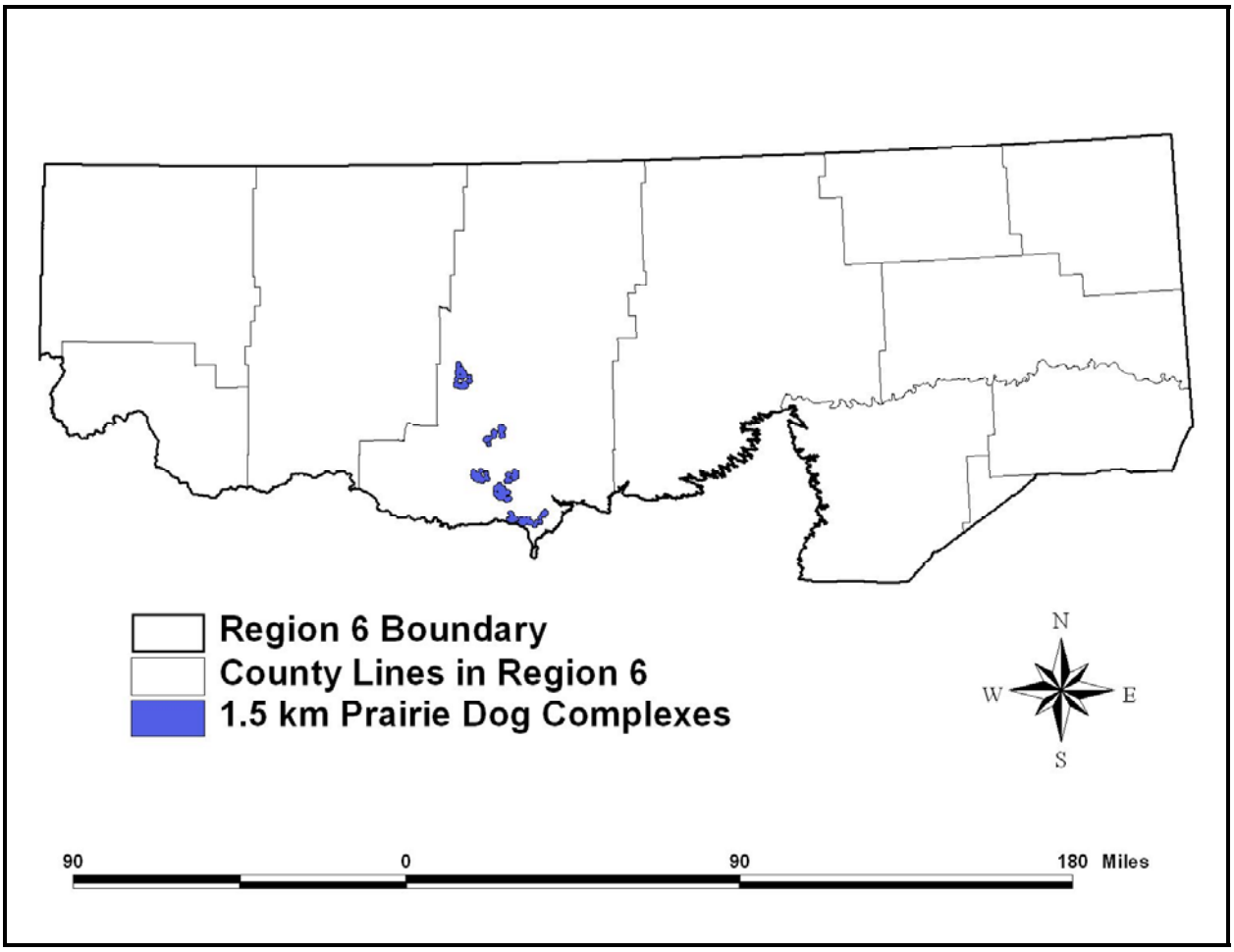

Figure 3. Region 6 prairie dog complexes using 1.5 km rule in early 2005.

REGION 6 PRAIRIE DOG PLANNING PROCESS

Collaborative Development of Objectives

The Conservation Plan for Black-Tailed and White-Tailed Prairie Dogs in Montana (MPDWG 2002) in Objective #2, Strategy B encouraged the formation of local working groups to facilitate the establishment of regional abundance and distribution goals. It further identified that FWP was responsible for this effort. To that end, the Region 6 Prairie Dog Advisory Board was established and protocols to develop regional abundance and distribution goals adopted in a Collaborative Process Agreement. The first meeting of the Region 6 Prairie Dog Advisory Board was convened in August 2002.

The agreed upon purpose of the Board is to:

a. Produce prairie dog abundance and distribution standards that dovetail with the statewide plan, to manage prairie dog populations and habitats to ensure long-term viability of prairie dogs and associated species.

b. Within the context of the state goals, this Board will identify opportunities and constraints for how many prairie dogs could be accommodated in Region 6 while attempting to meet the needs of landowners, agencies, wildlife, recreationists and Region 6 communities.
c. Deliver a package of recommendations for FWP Region 6 to analyze and put in the form of a FWP Region 6 Plan for the Board's review, broader public comment and review, and the FWP Region 6 Regional Supervisor's signature

The Board committed to informal, voluntary negotiations and developed a work plan, timelines and anticipated outcomes during the first meetings. Further, ground rules and decision-making processes were developed. The Montana Consensus Council facilitated meetings of the Board.

Representatives on the board are from Region 6 and elsewhere in Montana. Individual members were selected to provide a diversified perspective in the conservation and management of prairie dogs. The board consisted of 12 individuals from the private sector, governmental agencies, and non-governmental organizations. These individuals represented the BLM, ranchers, local business, recreational shooting sports, Malta Chamber of Commerce and Agriculture, private landowners, USFWS, FWP, National Wildlife Federation, The Nature Conservancy, and Dept. of Natural Resources Conservation. All meetings were open to the public and participants from other organizations were invited to participate. A list of participants is provided in Appendix A.

Public Review

The public will have an opportunity to comment on the Draft Region 6 Prairie Dog Abundance and Distribution Plan. This plan is accompanied by a Draft Environmental Assessment (EA). The Plan and the Draft EA will be submitted for 30-day public review and comment. Following the review period, comments will be compiled and revisions to the Plan will be made. The final Plan and Record of Decision will be presented to the Region 6 Supervisor for signature.

REGION 6 PRAIRIE DOG ISSUES

The following section is a brief overview of issues surrounding prairie dogs and their conservation in Region 6. For more complete information on these issues, see Luce (2003) and Montana Prairie Dog Working Group (2002). As the Drat Region 6 Abundance and Distribution Plan objectives are implemented, one or more of the following issues are likely to be of importance when making "on-the-ground" decisions.

Ecological Values

Prairie dogs serve an important role in the prairie ecosystems. Prairie dog colonies enhance the heterogeneity of prairie ecosystems and have been described as islands of biodiversity in a prairie sea by providing unique habitat patches. As such, prairie dog management will also affect the biodiversity and ecological processes of the prairie ecosystem. As mentioned above, several wildlife species are closely linked to prairie dog colonies. Management of prairie dogs will have direct and/or indirect impacts on these and other wildlife species. The herbivory of

prairie dogs alters the species composition and structure of plant communities. Prairie dogs also affect the rate of ecosystem processes including disturbance and nutrient cycling. Management of prairie dogs will have an impact on these processes as well.

Vegetation and Wildlife

Native vegetation occurring on prairie dog towns is generally of earlier ecological succession compared to surrounding native prairie. That is, compared to native surroundings, prairie dog towns typically support more annual forb and grass species and fewer perennials and shrub species. Changes in vegetation composition resulting from prairie dogs can have a positive, negative, or neutral effect on other wildlife species. As earlier described, mountain plover prefer habitats with very short or no vertical cover and therefore rely heavily on prairie dogs for providing suitable breeding habitat. By contrast, nesting sage grouse require relatively dense stands of sagebrush with residual grass cover. Adverse impacts to vegetation and wildlife increases with increasing size of prairie dog colonies and closer spaced complexes.

Livestock Grazing

Black-tailed prairie dogs feed primarily on grasses and forbs. The effect they have on forage availability for other grazers such as livestock is likely to vary by year and area. From a forage standpoint, livestock producers and resource managers generally consider the net effect of prairie dogs to be a reduction in available herbaceous forage to livestock. This effect is likely to be exacerbated under drought conditions. Further, adverse impacts to livestock grazing increases with increasing size of prairie dog colonies and closer spaced complexes.

Recreation

Black-tailed prairie dogs provide wildlife viewing and recreational shooting opportunities. In some parts of Region 6, these activities are of local economic importance. The impacts of recreational shooting on black-tailed prairie dogs are not well understood. In Wyoming, recreational shooting was shown to reduce juvenile recruitment and adult female density (Pauli 2005). Additionally, Pauli (2005) found that shot and unshot colony size increased in aerial extent, but colony expansion was greater in unshot colonies verses shot colonies (49.6 and 25 percent respectively). In Montana, Vosberg and Irby (1998) demonstrated a behavioral response to shooting.

In 2001, a seasonal closure was adopted on federal lands by FWP and the FWP Commission to restrict prairie dog shooting on federal lands in Montana during March, April, and May. This annual rule has since been adopted during the following 2 years. In 2004, the Commission changed this regulation to a biennial rule. Yearlong shooting closures on BLM and DNRC lands have also been established for two prairie dog complexes in south Phillips County where black-footed ferrets are being re-introduced. Prairie dog shooting is also prohibited on the Charles M. Russell and UL Bend National Wildlife Refuges. Recreational shooters and some landowner and business interests would like to retain remaining opportunities for recreational shooting.

ALTERNATIVES

The Board developed a set of Key Considerations for the development of alternatives and implementation of the plan. Interested members of the Board were asked to develop alternatives with the Key Considerations in mind. Three alternatives were authored by members of the board and presented to the entire board. The three alternatives were reformatted and included in this plan. A fourth alternative (Alternative D, No Action) was developed by FWP in cooperation with managing agencies. A fifth alternative (Alternative E, Preferred Alternative) defining distribution and abundance objectives was developed through a collaborative process by board members. FWP using portions of the previous 4 alternatives developed the operational approach of Alternative E. Summaries of acreage and distribution objectives are given in Table 4, page 29.

Key Considerations for Prairie Dog Planning and Implementation

1) Work collaboratively to meet, where possible and practical, the primary interests that stakeholders have.

2) Actively work with the "willing" toward prairie dog acreage and complex arrangements that provide lasting conservation and stewardship of prairie dogs and associated species, including black-footed ferrets.

3) Prairie dog abundance and distribution objectives will provide an important contribution toward fulfilling goals of the Conservation Plan for Black-Tailed and White-Tailed Prairie Dogs in Montana, January 2002.

4) Maintain historic distribution of prairie dogs within Region 6 as indicated in the Statewide Plan.

5) Acknowledge past commitments of public land and wildlife managers contained in the Bureau of Land Management's Judith, Valley, Phillips Resource Management Plan (JVP) obligation on BLM-administered lands not to exceed 13,220 acres of prairie dogs in Phillips County and 800 acres of prairie dogs in Valley County, but realize there is flexibility to plan above JVP levels on allotments through voluntary and incentive-based approaches.

6) A diverse mix of incentives will help with implementation of the Plan. The choice of a particular incentive would be left to each individual landowner.

Alternative A

Abundance Objectives

This alternative calls for a minimum of approximately 27,000 acres of occupied prairie dog habitat in Region 6 not including the CMR. This alternative does not define an upper limit on abundance, but instead allows the upper limit of prairie dog acreage to be defined by current landowner tolerance.

Alternative A Assumptions

1. There is incomplete understanding of the needs of associated species, including black-footed ferrets.
2. Black-footed ferret survival may not be contingent upon expansion of occupied prairie dog habitat because all limiting factors are not known.
3. Prairie dog abundance and distribution above 75% of the 1988 levels are not necessary to ensure the long-term survival of prairie dogs and associated species.
4. Prairie dog and associated species conservation is compatible with ranching and agricultural production.
5. The agricultural and local business economy will not be adversely affected under this alternative.

Complex Objectives

Alternative A provides acreages within the 3 Complex types as follows:

- One Category 1 complex of 5,000 or more acres of active dog towns spaced a maximum of 1 mile (1.5km) between towns. A 2-mile buffer of the Category 1 complex would be kept free of prairie dogs; and,
- Three Category 2 complexes of 1,000 or more acres of active dog towns. Each town within these complexes would be spaced a maximum of 4.4 miles (7km) apart. A 2-mile buffer of all Category 2 complexes would be kept free of prairie dogs; and,
- The remaining acreage of occupied prairie dog habitat would support Category 3 complexes of less than 1,000 acres each distributed over the historic prairie dog range in Region 6.

Operational Approach

Under Alternative A, Region 6 would support prairie dog acreages that are based in part on landowner tolerance and the ability of incentives to facilitate planned prairie dog expansion while acknowledging commitments made in existing resource management plans.

Until workable incentives are developed, Phillips County and Valley County would support an acreage ranging between 75% of the 1988 prairie dog abundance levels and up to the 1988 abundance levels (Table 2.). Because 1988 survey information exists only for Phillips and Valley Counties, other counties would use the most current survey information available for a

benchmark level. Upon reaching the 1988 levels or benchmark levels, prairie dogs would be controlled to 75% of these levels during a single season.

In counties with fewer than 1,500 acres of occupied prairie dog habitat on public land, 1,500 acres of occupied prairie dog habitat on public land would be the benchmark level. Prairie dogs in these counties would be managed for a range of 75% of benchmark level to the benchmark level. Control would not be initiated in these counties until 1,500 acres of occupied prairie dog habitat was established. Prairie dog acreage in these counties would be allowed to expand to these levels naturally or could be actively managed through translocation into suitable habitat. Table 2 shows the number of prairie dog acres committed to under this alternative.

Table 2. Prairie dog acreage objectives by county under Alternative A.

County (or portion within Region 6 historical prairie dog range)	Prairie Dog Acreage	
	Current Acreage* (1988 levels, if known)	Proposed Minimum Acreage Alternative A**
Chouteau	4,933	3700
Hill	134	1500
Blaine	1,311	1500
Phillips	19,820 + CMR (21,646 + CMR)	14865 + CMR
Valley	1,784 (960)	720
McCone	277	1500
Dawson	0	1500
Richland	0	1500
Total	28,259 + CMR (22,606 + CMR)	26,785 + CMR

*Current acreage is based on the most recent survey information available. The majority of data in these acreage figures was collected during years 2000-2003 however limited data was as early as 1996.
**Alternative A allows individual ranches to expand prairie dogs with no upper limit. The stated minimum, therefore, may be exceeded.

As effective incentives, including a control mechanism, become available, planned expansion of prairie dogs on individual ranches would be allowed on a voluntary basis with no upper limits. Planned expansion of prairie dogs would only be initiated with willing landowners or permittees. Although shown as a countywide objective, actual management and acreage objectives would be managed at the allotment or ranch level.

A partnership of stakeholders would work toward development of one or more Rodent Control Districts or other type of prairie dog abatement program. This program would provide control measures on private, state, and federal lands, with the intent to maintain prairie dog acreage levels and to assure controlled expansion of prairie dogs under alternative objectives. Managing agencies and landowners would be responsible for funding prairie dog abatement on public and private lands, respectively, unless otherwise agreed to.

Alternative B

Abundance Objectives

Alternative B calls for approximately 49,000 acres of occupied prairie dog habitat in Region 6. This alternative does not define an upper limit on abundance, but instead allows the upper limit of prairie dog acreage to be defined by landowner tolerance.

Alternative B Assumptions

1. There is incomplete understanding of the needs of associated species, including black-footed ferrets. This uncertainty mandates a functional approach toward the process of setting objectives.
2. All potential habitat within the former range of the prairie dog in Montana is important to conservation of the prairie dog and associated species.
3. On federal lands, the biological needs of prairie dogs and their associates should be given priority over other species' management needs within Category 1 complexes.
4. Uncertainty and management of risk related to catastrophic failure of Category 1 complexes due to plague epizootics suggest that redundancy of Category 1 complexes in Region 6 is needed.
5. Low prairie dog abundance and excessively-spaced distribution are the most likely reason that ferret reintroduction has not succeeded in north-central Montana to date.
6. The statewide distribution of prairie dogs indicates that Region 6 contains a proportionally higher share of prairie dogs, and thus Region 6 will have to bear a disproportional share of the overall state plan prairie dog acreages in order to ensure state objectives are met.
7. Establishing a broad distribution of prairie dogs in Region 6 will improve persistence of prairie dogs and associated species.
8. The probability of long-term survival of associated species including (but not limited to) mountain plover, burrowing owl and ferruginous hawk will be enhanced by providing additional acreage of prairie dog colonies.

Complex Objectives

Alternative B provides a range of acreages within 3 complex types as follows:

- Two Category 1 complexes capable of sustaining a viable population of black-footed ferrets. Based on current information, target objectives for these complexes should be not less than 10,000 acres of occupied prairie dog habitat spaced 40 miles apart where active dog colonies within each complex are spaced a maximum of 1 mile (1.5 km) between colonies. These preliminary targets may be adjusted upwards or downwards based on experience; and,
- Additional complexes of at least 1,000 acres that have the objective of providing refugia for prairie dogs from epizootics of plague and habitat for prairie dog associated species. For preliminary planning purposes, there should be 9 of these Category 2 complexes that

have a maximum of 1 mile (1.5 km) between colonies within the complex. Individual colonies would vary from small colonies to 300 acres or more in size and total no less than 9,000 acres of occupied prairie dog habitat by establishing a Category 2 complex in each of 9 Prairie Dog Conservation Units (PDCUs) identified in Figure 4. Based on experience obtained on the persistence of these complexes through plague epizootics, the number and distribution of Category 2 complexes may be increased, decreased or reconfigured; and,

- A total of 20,000 acres of Category 3 prairie dog towns stratified by PDCU. A Category 3 complex is defined as complexes and isolated colonies too small or too widely spaced to fit within Category 1 or Category 2 definitions.

Operational Approach

Under Alternative B, Region 6 would work toward developing specific category complexes distributed over the project area. Both Category 1 and 2 complexes would be sited to maximize use of federal (i.e., NWR and BLM) and state lands. Tribal lands could also serve as sites for these complexes if a memorandum of understanding is in place between the tribes and FWP. However occupied acreages on tribal lands would be in addition to what is identified in this alternative.

Both Category 1 complexes under this alternative would be capable of supporting viable black-footed ferret populations. In areas where black-footed ferrets are to be reintroduced in an attempt to establish a permanent population, prairie dog expansion will be encouraged to the maximum extent possible with the concurrence of private landowners involved. Further, if larger complexes are determined to be necessary for maintaining viable populations of prairie dog associated species other that ferrets, complex size and configuration will be redefined to reflect these needs. Figure 5 shows areas that, based on the habitat suitability model, appear to be biologically suited for a Category 1 complex using the definitions of this alterative. Further, Category 3 complexes would be distributed within 5 – 20 miles of each Category 1 complex to provide for natural dispersal into Category 1 complex in the event of plague in the Category 1 complex. FWP would work with the Fish, Wildlife & Parks Commission to restrict recreational prairie dog shooting in areas inhabited by black-footed ferrets. Under this alternative, one Category 1 complex would be identified and managed for black-footed ferrets and associated species within a year of this plan's adoption. A second Category 1 complex would be identified and managed for ferret reintroduction within two years of this plan's adoption.

Complex 2 and Complex 3 categories would be managed using nine proposed Prairie Dog Conservation Units (PDCUs) as illustrated in Figure 4. Within Region 6, PDCUs include areas where prairie dogs are known to have occurred in historically. PDCU 1 includes north Hill County, PDCU 2 includes south Hill Co. and northeastern Chouteau Co., PDCU 3 is north Blaine Co., PDCU 4 is south Blaine Co., PDCU 5 is north Phillips Co., PDCU 6 is south Phillips Co., PDCU 7 includes northern and eastern Valley Co. and portions of Daniels and Roosevelt Counties, PDCU 8 includes southwestern Valley Co., and PDCU 9 includes portions of McCone,

Dawson, and Richland Counties within the historical range of prairie dogs. Highway 2, running west east, separates northern PDCUs from southern ones.

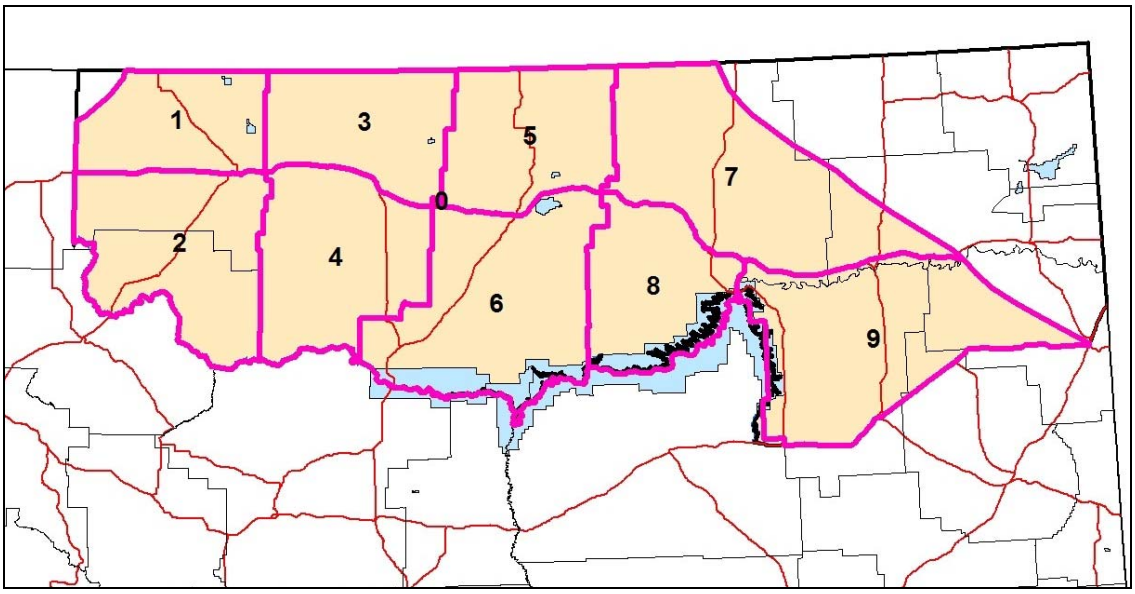

Figure 4. Boundaries of Proposed Prairie Dog Conservation Units in Region 6.

Category 2 complexes would be maintained and developed to conserve prairie dogs and to support other prairie dog associated species, such as mountain plover, burrowing owls, and ferruginous hawks. A Category 2 complex under this alternative would be developed in each of the PDCUs. These Category 2 complexes under this alternative would serve to support species that utilize prairie dogs and provide the potential to be converted into Category 1 complexes if made necessary by unforeseen events. As compatible, FWP would work to continue to allow prairie dog shooting on Category 2 and 3 complexes. Proposed sites for a Category 2 complex in each PDCU would be identified within a year of plan adoption and management of these sites to achieve Category 2 objectives would be initiated within two years of plan adoption.

Efforts would be made to maintain or develop Category 3 complexes within a 5-20 mile radius of each Category 1 complex, which would help serve to re-establish a colony after a plague event. The objective for Category 3 complexes is to assure a widespread geographic distribution of prairie dog colonies throughout areas of acceptable habitat within Region 6, to provide refugia colonies that may be used to repopulate Category 1 or 2 complexes depleted by plague epizootics, and to provide for widespread distribution of species. Under this alternative, management would strive to achieve a distribution of Category 3 complexes and colonies within each PDCU in the same proportion that each PDCU has of the total original range of prairie dogs in Region 6 (Table 3.). For example, PDCU 1 has 7% of the original range of prairie dogs in Region 6 (Table 3.) so the target for PDCU 1 is at least 7% of the overall target of 20,000 acres of Category 3 colonies and complexes for Region 6 or 1400 acres. Furthermore, PDCUs that maintain Category 1 or Category 2 complexes could subtract 200% of the acres in Category 1 or 2 from their Category 3 acreage targets. The purpose of this is to accommodate the higher value of Category 1 and Category 2 complexes relative to smaller complexes. Where necessary to establish Category 3 complexes in areas not currently occupied by prairie dogs, the steps to

initiate translocation will be initiated within a year of plan adoption and approved translocations will occur as soon as practicable thereafter.

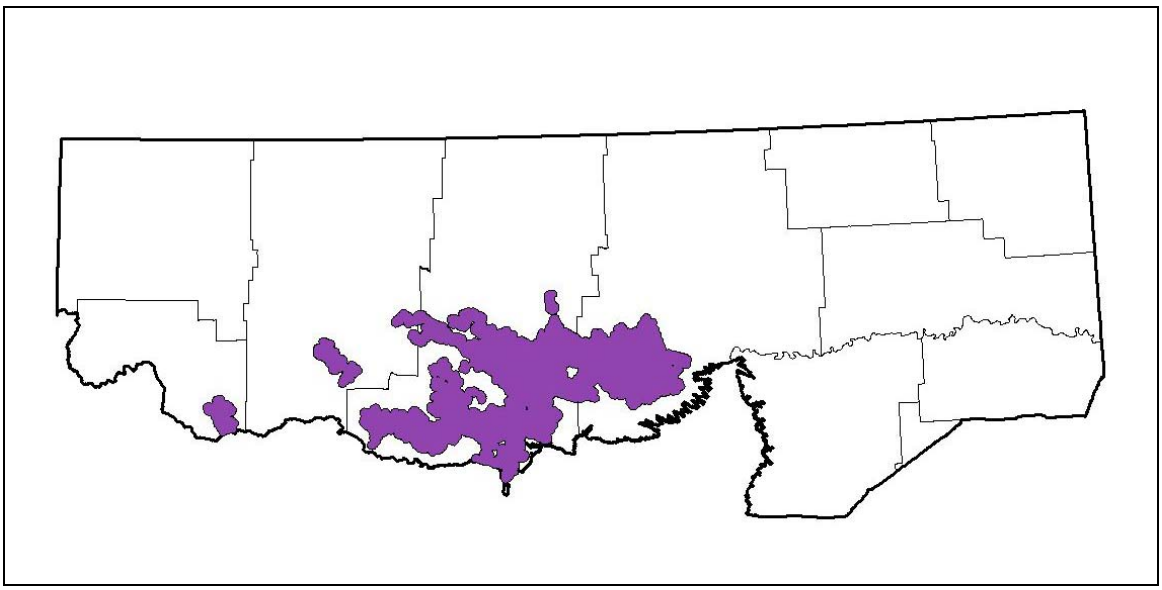

Figure 5. Potential Category 1 complex areas (using the 1-mile spacing rule) based on habitat suitability model.

Table 3. Areas of PDCUs in Montana Fish, Wildlife and Parks Region 6 and estimated acreage occupied by prairie dogs.

PDCU	TOTAL ACRES IN PDCU	ACRES CURRENTLY OCCUPIED BY PRAIRIE DOGS	% CURRENTLY OCCUPIED WITHIN PDCU	% OF REGION 6 AREA RANGE WITHIN PDCU
1	1,022,741	134	0.01	7
2	1,656,631	4,901	0.30	12
3	1,166,366	720	0.06	8
4	1,543,594	583	0.04	11
5	1,281,306	807	0.06	9
6	2,050,629	24,826	1.21	14
7	2,170,279	539	0.02	15
8	1,180,390	1,236	0.10	8
9	2,126,973	267	0.01	15
TOTALS	14,198,909	34,018	0.24	100

FWP would encourage appropriate federal, state, and private entities to target financial incentives to private and tribal landowners who are willing to maintain Category 1, 2 or 3 complexes. Incentives should be prioritized by complex with Category 1 complexes having the highest value. Complexes with the greatest amount of public land included are a higher priority as well. Participation by private landowners would be voluntary and at the landowners'

discretion. This alternative would not impose restrictions regarding the control of prairie dogs on private land. Conversely, when translocations are deemed necessary, all translocations will follow Montana's translocation policy.

Alternative C

Abundance Objectives

This alternative calls for a minimum of approximately 30,000 acres of prairie dog habitat in Region 6. The minimum acreage is based on acreages recorded around 1988, interpreted as roughly the maximum landowner tolerance level for prairie dogs in the absence of incentives and other partnership agreements. This alternative does not define an upper limit on abundance, but instead allows the upper limit of prairie dog acreage to be defined by current landowner tolerance. To reduce the cost and improve the feasibility of implementation, this alternative calls for managing acreage within a specified range (such as 33,000 acres, plus or minus 10%) as opposed to managing for a specific acreage target.

Alternative C Assumptions

1. There is incomplete understanding of the needs of prairie dogs and associated species, including black-footed ferrets. Similarly, there is an incomplete knowledge of how to most effectively deal with the presence of sylvatic plague.
2. The probability for long-term survival of mountain plovers, burrowing owls and ferruginous hawks will be enhanced by providing additional acreage of prairie dog towns with suitable nesting habitat for those species.
3. A Category 1 complex of 5,000-10,000 acres with no more than 1 mile between colonies is expected to aid in the successful re-introduction of black-footed ferrets. This alternative focuses on providing habitat to sustain a viable population of free-ranging ferrets with a calculated 90% probability of survival (without augmentation) for 50 years.
4. Improving the distribution of prairie dog towns has the potential to significantly increase the effectiveness of even the current acreage of prairie dogs, if the size and proximity of the colonies to one another favor ferret survival, and if the colonies feature prime nesting habitat (such as small cobble substrate) for plovers.
5. This alternative will be implemented so that it does not create unprecedented conflicts with other species of special concern, especially sage grouse.
6. The distribution and abundance of prairie dogs may influence the incidence and outcomes of sylvatic plague.

Complex Objectives

Alternative C provides a range of acreages within 3 complex types as follows:

- One Category 1 complex of 5,000-10,000 acres of active dog towns spaced no more than 1 mile apart. Within this acreage range, the objective would be weighted toward 10,000 acres; and,

- A minimum of six Category 2 complexes of 1,000-2,000 acres of active dog towns. Towns within a complex would be spaced no more than 1 mile apart. In total, this alternative would support approximately 10,000 acres of active prairie dog habitat in Category 2 complexes; and,
- Approximately 10,000 acres of Category 3 prairie dog towns would be scattered throughout the historic prairie dog range in Region 6.

Operational Approach

Due to lack of perfect biological knowledge, this alternative is based in three general principles. First, that we err on the side of caution so that ferrets and plovers are not lost by providing insufficient prairie dog habitat. Second, that we approach the entire issue of prairie dog numbers and distribution, and the recovery of ferret and plover populations, from the standpoint of adaptive management. In other words, we would set measurable goals, design implementation as the experiment that it is, monitor outcomes, and adhere to a schedule of rigorous, regular examinations of performance with course corrections made as necessary. Third, that the process of designing, implementing and adaptively adjusting the prescription for prairie dog management be anchored in a broad-based consensus approach. This approach is necessary to pave the way to mutually respectful, reciprocal relationships among stakeholders that are the prerequisite of the future management flexibility required for adaptive management.

As an initial step, the Partnership would work with landowners to maintain current acreage of prairie dog colonies while improving distribution to meet needs of associated species. Strategic alteration of current distribution and abundance to meet the identified goals of the Partnership would require voluntary agreements utilizing incentive programs and a demonstrated ability to control prairie dogs. This approach would include agencies, landowners, lessees, and neighbors who are apt to be affected by projects. The alternative would not focus prairie dog acreage on public lands in preference to other land ownerships. From a biological standpoint, land isn't inherently different just because it's owned publicly or privately. In this alternative, strategies would be employed that most effectively manage prairie dogs and build consensus among stakeholders throughout Region 6, blind to administrative boundaries.

This alternative calls for Category 2 complexes with no more than 1 mile between towns. This arrangement would facilitate possible testing of the idea that ferret survival might also be possible on complexes of 1,000-2,000 acres in size, and could provide alternative locations for transfer of the Category 1 complex, should the primary site for it fail or become infeasible.

Under the Alternative, FWP would work with the Fish, Wildlife & Parks Commission to maintain recreational shooting opportunities for prairie dogs on public lands in Category 3 complexes, and in Category 2 complexes not hosting ferrets. Shooting opportunities on private lands would continue to be offered in accordance with landowner tolerance. FWP would also work with the Commission to prohibit prairie dog shooting in the Category 1 complex and other ferret recovery zones.

The Partnership would agree to provide control, at the landowners' request, of prairie dogs expanding from the Category 1 complex. This would establish a buffer zone around the

Category 1 complex of up to 2 miles wide, where there would be control of prairie dogs across all land ownerships, if landowners requested such control.

Alternative D (No Action Alternative)

Abundance Objectives

This alternative calls for maintaining acreage objectives identified in current resource management plans (i.e., BLM Big Dry, JVP and West Hi-Line RMPs) and retaining current management practices. Under this alternative, approximately 26,000 acres (12,346 BLM acres, 5,800 CMR acres, 2,012 DSL acres and 5,827 private acres) of occupied prairie dog towns, spaced a maximum distance of 7 km (4.34 miles) between towns, would be maintained in Phillips County (on an allotment-by-allotment basis) based on 1988 prairie dog survey data. In addition, 874 acres of occupied prairie dog habitat would be maintained in Phillips County outside the 7-km Complex based on the 1988 survey. In the Valley RA, 800 acres of occupied prairie dog habitat would be maintained and 71 acres in Judith RA. On other BLM lands in Region 6, BLM would allow for the natural fluctuation of occupied prairie dog acres on public lands. This alternative does not specifically prohibit control or expansion of prairie dogs.

Alternative D Assumptions

This alternative is the No Action alternative and has the following implied assumptions:

1. No additional management is needed to meet statewide prairie dog abundance and distribution objectives within Region 6.

Complex Objectives

Alternative D provides acreages within the complex types identified in current resource management plans as follows:

- One Category 1 complex of 5,000 or more acres of active dog towns spaced a maximum of 4.34 mile (7km) between towns; and,
- Category 2 and Category 3 complexes would not be actively managed other than to maintain 1988 levels.

Operational Approach

Under Alternative D, Region 6 would support prairie dog acreages that are based on current resource management plans and current management policy. In Phillips County, BLM in cooperation with USFWS and FWP, and through cooperative agreements with CMR, DSL and private landowners, would maintain approximately 26,000 acres (12,346 BLM acres, 5,800 CMR acres, 2,012 DSL acres and 5,827 private acres) of occupied prairie dog habitat within the 7-km Complex, based on the 1988 survey. In addition, 874 acres of occupied prairie dog habitat would be maintained in Phillips County outside the 7-km Complex based on the 1988 survey.

BLM would maintain 12,346 acres of prairie dog habitat on BLM land. However these acres may fluctuate according to guidelines in the JVP. If the BLM is able to make agreements through cooperative planning, BLM may reduce or exceed the 12,346 acres of occupied prairie dog habitat on BLM land within the 7km Complex. If the BLM cannot reach such cooperative agreements, then BLM will maintain the original 12,346 acres of occupied prairie dog habitat on BLM land within the 7km Complex. Prairie dog expansion beyond 1988 levels within the 7km Complex would not be allowed without mitigation. Any loss of livestock forage due to prairie dog habitat increases on BLM land above the 1988 survey levels would be mitigated through land treatments (mechanical, fire, etc.). The BLM is under no obligation to control or expand the amount of occupied prairie dog acres on BLM land due to expansion or control of prairie dogs off of BLM land. However, developing additional habitat on BLM land in the vicinity of the habitat loss may compensate for the loss of prairie dog habitat off of BLM land.

In the Valley RA, BLM would manage for 800 acres of occupied prairie dog habitat and in Judith RA, BLM would manage for 71 acres of occupied prairie dog habitat on BLM lands.

Under other Resource Management Plans, BLM would manage one town in the West Hi-Line Resource Area to provide habitat for associated species and provide recreational shooting opportunity. Prairie dog acres under 10 acres would not be actively managed. On other lands in Region 6, BLM would allow for the natural fluctuation of occupied prairie dog acres on BLM lands.

Region 6 would not actively manage prairie dogs on private lands.

Further, FWP would work with the Commission to maintain current regulations already in place. Specifically, FWP would work with the Commission to maintain the regulation that closes the shooting of prairie dogs occupying public lands other than state school trust lands during the months of March, April and May. This regulation does not apply to privately owned lands. Further, FWP would work with the commission to maintain the year-round prairie dog shooting closures on areas designated in Phillips County as black-footed ferret reintroduction areas known as the 40 Complex and Pea Ridge.

Alternative E (Preferred Alternative)

Abundance Objectives

The abundance and complex objectives of this alternative was reached by consensus of the Board. This alternative calls for managing active prairie dog acreage within a range from 30,500 acres to 41,400 acres (36,000 acres plus or minus 15%) as opposed to managing for a specific acreage target. This alternative does not preclude the expansion of prairie dog acreage above the specified range nor control within, above or below the specified range.

Complex Objectives

Alternative E provides acreages within 3 complex types as follows:

- One Category 1 complex of 5,000 + acres of active dog towns spaced no more than 1.5 km (1mi.) apart. This Category 1 complex will not be actively managed to exceed 10,000 acres; and,
- Six to eight Category 2 complexes of 1,000 or more acres of active dog towns. Two or three of these complexes would follow the 1.5 km rule and the remainder would follow the 7 km rule; and,
- Category 3 prairie dog towns would be scattered throughout the historic prairie dog range in Region 6.

Alternative E Assumptions

1. There is incomplete understanding of the needs of associated species, including black-footed ferrets.
2. A Category 1 complex of 5,000+ acres with no more than 1 mile between colonies is necessary for the successful re-introduction of black-footed ferrets.
3. Establishing a broad distribution of prairie dogs in Region 6 will improve the probability of persistence of prairie dogs and associated species.
4. Prairie dog and associated species conservation is compatible with ranching and agricultural production.

Operational Approach

While the abundance and complex objectives of this alternative was reached by consensus of the Board, the operational approach was developed by FWP using portions of the operational approaches found in the previous 4 alternatives. Implementation of Alternative E would be guided by the Key Considerations and accomplished by employing the tools and resources listed in this document. Effort would be made to avoid adversely affecting the agricultural and local business economy. Additionally, this alternative will be implemented in such a way that it does not create unprecedented conflicts with other Species of Special Concern.

Management for complex objectives would achieve acreage objectives. If known active prairie dog acreages are within the specified range of acreage objectives upon adoption of this plan, implementation would be directed toward reaching complex objectives. The highest priority would be given to establishment of a Category 1 complex of 5000+ acres. The next priority would focus on maintaining existing Category 3 complexes and establishment of Category 2 complexes given the lowest priority.

The establishment of a Category 1 complex as defined by this Alternative would be accomplished by allowing and/or facilitating natural expansion of existing prairie dog towns and/or translocation. Any translocations would follow the translocation protocols in Administrative Rules of Montana. Prior to initiation of actual on the ground work, e.g. translocation, the boundaries of this complex would be defined and all landowners and land

management agencies within these boundaries contacted and be in agreement to establishment of this complex. If agreement by land management agencies and landowners cannot be achieved, the complex boundaries would be redefined until agreement is reached. Upon establishment of a minimum of 5,000 acres of active prairie dogs, additional acreage to this complex would be allowed to occur naturally without augmentation. It is not intended that this colony exceed a total of 10,000 acres. The Board agreed that if a viable population of black-footed ferrets was not established upon reaching a 10,000 acre Category 1 complex under the 1.5 km rule, the assumptions about the relationship between PD colony size and spacing and the viability of ferret populations would need to be reexamined prior to further expansion of the Category 1 complex. Further, the board agreed that after all regional plans are completed, if state plan objective of 2 Category 1 complexes is not achieved, Region 6 would give consideration toward developing a second Category 1 complex following statewide plan definitions of a Category 1 complex, which may occur within reservation boundaries if a MOU is agreed upon.

Establishment of Category 2 complex objectives would follow similar guidelines as the Category 1 complex objective. Initial priorities would be establishment or maintenance of two 1000+ acre complexes under the 1.5 km rule. These complexes should be separated by a minimum of 10 miles. Secondary priority would be establishment or maintenance of four 1000+ acre Category 2 complexes under the 7 km rule. At least 50 miles should separate two of these complexes. Category 2 complexes that exceed the minimum acreage by 1,500 acres could be counted as two Category 2 complexes.

The objective of Category 3 complexes is to maintain the historic distribution of prairie dogs in Region 6. The focus of maintenance of existing and/or establishment of new Category 3 complexes would be in Blaine North of Highway 2, Phillips north of Highway 2, Valley north of Highway 2, Hill, and McCone counties (referred to here as the Category 3 area). Currently, no prairie dogs are known to exist in those portions of Region 6 within the following counties: Roosevelt, Richland and Dawson. No effort would be expended to establish prairie dogs in those counties.

The current level of prairie dogs on a county-by-county basis represents a level of landowner tolerance. Effort would first be focused on securing the perpetuation of existing colonies in the counties mentioned above. Further effort would be directed at searching for prairie dog towns that have yet to be documented in the Category 3 area mentioned above. Establishment of Category 1 or Category 2 complexes in the Category 3 area would not be precluded. Re-establishment of Category 3 complexes as a result of a disease outbreak, stochastic event, etc. would follow the guidelines in Category 1 complexes.

All existing state and federal regulations would be followed, e.g. translocation protocol, shooting closures, etc.

Table 4. Region 6 Prairie Dog Distribution and Abundance Alternatives Summary

	Category 1	Category 2	Category 3	Total Acreage
Current Situation	(1)24,720 Acres 7 km Rule	(3) 6383 Acres 7 km Rule	(22) 3415 Acres 7 km Rule	34, 518 Acres
	(0) 0 Acres 1.5 km Rule	(6) 9414 Acres* 1.5 km rule	(261) 25,104* 1.5 km rule	
Alternative A	(1) 5,000+ Acres 1.5 km Rule	(3) 1,000+ Acres 7 km Rule	Remaining Acres Distributed by County	26,785 Acres + CMR (6122 Acres) (32,907 Total)
Alternative B	(2) ± 10,000 Acres 1.5 km Rule	(9) 1,000+ Acres 1.5 km Rule	20,000 Acres Distributed by PDCU	Approx. 49,000 Acres
Alternative C	(1) 5,000 – 10,000 Acres 1.5 km Rule	(6) 1,000 – 2,000 Acres 1.5 km Rule	10,000 Acres Distributed Across R6	Approx. 30,000 Acres
Alternative D (No Action)	(1) 5,000 Acres 7 km Rule	Not Actively Managed	Not Actively Managed	Approx. 27,800 Acres
Alternative E (Preferred Alternative)	(1) 5,000+ Acres 1.5 km Rule	(6 – 8) 1000+ Acres (2-3) 1.5 km Rule (4-6) 7 km Rule	Maintenance of Existing Colonies Distributed in Category 3 Area	30,500 – 41,400 Acres** (36,000 +/- 15%)

* Some of the colonies within these complexes experienced a plague epizootic event in 2005. Therefore, it is not known exactly how many complexes under the 1.5 km rule exist in Region 6 until mapping is completed in the fall and winter of 2005.
** This alternative does not preclude the expansion of prairie dog acreage above the specified range nor control within, above or below the specified range.

REGION 6 PLAN IMPLEMENTATION

Implementation Committee

Execution of this Plan will be overseen and coordinated by an implementation committee. The implementation committee will be assembled with assistance from FWP following adoption of this document. This committee will include agency personnel from FWP, BLM, and USFWS, representatives from interested non-governmental organizations, and interested landowners or representatives from landowner organizations. The initial objectives of the implementation committee will be determination of members, establishment of meeting schedules, timelines, and work plans.

The committee is not intended for "the scheduling of more meetings" but instead assuring implementation of the Plan will be done in a coordinated and biologically based manner within Region 6. Using a voluntary, incentive-based approach, the roles of this committee will be to: 1) identify priority focus areas for assuring conservation of prairie dogs and associated species; 2) help develop strategies and solutions in response to issues; and 3) to appoint one or more point persons to work directly with landowners and lessees to ascertain interest and customize an approach for working on a particular area or property.

Monitoring

Prairie dog abundance and distribution will be monitored using protocols currently under development by the Monitoring Subcommittee of the Montana Prairie Dog Working Group. The USFWS will continue to monitor prairie dog acreages inside the boundaries of the CMR and the BLM will monitor prairie dog acreages in Phillips County.

The USFWS currently monitors prairie dogs on a 3-year basis on the CMR. Prairie dogs on the CMR were last mapped in 2003 and are scheduled to be mapped again in 2006. However, limited mapping has occurred on the CMR in Phillips County for black-footed ferret reintroduction efforts.

Currently, the BLM maps all prairie dog acres in Phillips County outside of the CMR on public land and private land where permission is granted on a biennial basis. BLM mapped Phillips County 2002 and again in 2004. BLM is scheduled to map Phillips County in 2006.

In the event that the BLM or the USFWS are unable to continue their efforts to monitor prairie dog abundance, prairie dog abundance and distribution will follow subcommittee protocols. This does not preclude surveys, mapping, or monitoring of prairie dog acreage by any other method or during other times.

Incentive Programs

In large part, incentive programs for prairie dogs have application that extend beyond the Region 6 project area. Implementation Committee members will work through the Montana Prairie Dog Working Group to develop a diverse set of incentive programs intended to foster participation in this plan. The landowner or permittee would ultimately be responsible for selecting an incentive that best fits their unique situation.

Prairie Dog Conservation Tools and Resources

Effective conservation of prairie dogs and associated species on private, state, and federal lands in Region 6 requires a comprehensive list of tools and resources that are both presently available or likely to be available in the future. A description and status of each tool follows:

- Prairie dog mapping in Region 6
- Landowner incentive programs including a possible direct payment for conserving and/or allowing prairie dogs to expand. The State Prairie Dog Working Group is currently working with the NRCS to develop a concept plan.
- Habitat suitability model that shows areas where prairie dogs could potentially inhabit
- BLM will eventually be able to use containment (i.e., control) measures on BLM-administered lands.
- BLM has some ability to provide "improvements" to help mitigate for prairie dog impacts, especially if prairie dogs exceed JVP levels.
- The South Phillips County Rancher Stewardship Alliance and other ranching or work groups provide resources for implementing Plan strategies.
- Possible development of one or more rodent control districts to help contain prairie dogs and to deal with problem areas such as hayfields.
- In the future, the possibility exists for a publicly funded prairie dog containment program through Wildlife Services (APHIS) or some other entity.
- Livestock grass banking on The Nature Conservancy's Matador Ranch, providing incentives for prairie dog conservation and/or expansion on individual ranches.
- Potential for grazing incentives on CMR for existing permittees, intended to offset impacts for planned expansion of prairie dogs on permittees' ranches.
- Key Considerations and objectives identified in the Region 6 Prairie Dog Abundance and Distribution Plan
- Development of a multi-interest implementation committee that will meet annually to help assure the Plan's implementation is carried out in a manner agreed upon. One or more point people from the committee would be responsible for carrying out Plan objectives.
- Translocation
- Land Exchange
- Conservation Easements

LITERATURE CITED

Alt D. D. and D. W. Hyndman, 1994. Roadside Geology of Montana. Mountain Press Publishing Company. 427pp

Captive Breeding Specialist Group. 2004. Black-footed Ferret Population Management Planning Workshop. Final Report. IUCN/SSC Conservation Breeding Specialist Group: Apple Valley, MN.

Knowles, C. J., C. J. Stoner, and S. P. Gieg. 1982. Selective use of black-tailed prairie dog towns by mountain plovers. Condor. 84:71-74

Luce, R. J. 2003. A Multi-State Conservation Plan For The Black-tailed Prairie Dog, Cynomys ludovicianus, in the United States – an addendum to the Black-tailed Prairie Dog Conservation Assessment and Strategy, November 3, 1999.

MPDWG, 2002. Conservation Plan for Black-tailed and White-tailed Prairie Dogs in Montana. Montana, Fish, Wildlife and Parks, 51pp.

NOAA, 2004 (Last update November, 15 2004), Montana Climate Summary http://www.ncdc.noaa.gov/oa/climate/research/cag3/mt.html (Accessed: 2004, November 15)

Pauli, J. Ecological studies of the Black-tailed prairie dog (*Cynomys ludovicianus*): implications for biology and conservation. MS thesis, Univ. of Wyoming, Dept. Zoology and Physiology, Laramie.

Proctor, J. D. 1998. A GIS model for identifying potential black-tailed prairie dog habitat in the Northern Great Plains shortgrass prairie. M.S. Thesis. University of Montana, Missoula.

Rauscher, R. L. 2004. Bayesian Model of Black-tailed Prairie Dog Habitat in South Phillips County. FWP digital files.

Vosberg T. C. and L. R. Irby. 1998. Effects of recreational shooting on prairie dog colonies. J. Wildl. Manage. 62: 363-372

GLOSSARY

Partnership – individuals, agencies, and organizations who have an interest in prairie dogs and who are actively working toward and/or funding conservation solutions in Region 6. Many within the partnership would serve as members on the Plan Implementation Committee.